

## REMARKS

Upon entry of this amendment, claims 1 to 12 and 25 to 43 will be pending in the application, of which claims 1, 7 and 38 are being amended.

The claim amendments and added claims are fully supported by the Specification and original claims and add no new matter. For example, claims 1 and 7 are being amended to recite that the substrate processing chamber component structure is composed of metal, and this language is supported at least by the Specification, at page 12, lines 15-16.

Claim 38 is being amended to recite that the coating comprises aluminum-containing species comprising at least one of elemental aluminum or aluminum oxide, and zirconium-containing species comprising at least one of elemental zirconium or zirconium oxide, and this language is supported at least by the Specification, at page 8, lines 16-26.

Thus no new matter is being added, and entry of the claim amendments and added claims is respectfully requested.

Applicant thanks the Examiner for withdrawing the previously made section 112 rejections and objections, in view of the claim amendments and arguments presented in the previous response.

Applicant further thanks the Examiner for withdrawing the 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) rejections over Murakawa et al. (USP 6,447,937); Takeuchi et al. Abstract (JP 11-229142); and Otsuki (USPA 2001/003271). Applicant also thanks the Examiner for withdrawing the 35 U.S.C. § 102 (a and e) and 35 U.S.C. § 103(a) rejections over O'Donnell et al. (USPA 2004/0002221).

## Section 112 Rejection

Claims 38-37 were rejected under 35 USC 112 , first paragraph. The Office Action states:

The Specification, at page 8, lines 16-26, refers to specific aluminum and zirconium species, namely, metal and metal oxide species. It is unclear how the more broadly conceptualized structure having any aluminum and zirconium species is taught by the originally filed disclosure or is otherwise supported by the originally filed disclosure.

It should be noted that at the cited page 8, lines 16-26, the Specification expressly discloses the language "aluminum or zirconium-containing species", as follows:

The surface coating 117 can also comprise a second concentration gradient of a second species, such as an aluminum or zirconium-containing species, comprising at least one of elemental aluminum, elemental zirconium, aluminum oxide and zirconium oxide. [Emphasis added.]

Thus Applicant disagrees with the Office Action's stated position and reserves the right to pursue the contested language in other continuation applications without prejudice or disclaimer.

However, to expedite allowance of the current application, Applicant is amending claim 38 to recite that the coating comprises aluminum-containing species comprising at least one of elemental aluminum or aluminum oxide, and zirconium-containing species comprising at least one of elemental zirconium or zirconium oxide. Accordingly, this rejection should now be withdrawn.

It should be further noted that claim 38-40 were not rejected under any other rejection, and accordingly, these claims should now be allowable.

## **Section 102(b) and 103(a) Rejections**

Claims 1-4, 6-10, 12, 25-27 and 34-37 were rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 USC §103(a) as obvious over, Morita et al. (USPA 2002/0012791).

It should be notes that claims 1-4, 6-10, 12, 25-27 and 34-37 are all dependent on either claim 1 or claim 7.

As amended, claim 1 reads on a substrate processing chamber component structure composed of metal, and which has an electroplated coating on comprising a thickness having a gradually changing concentration of yttrium-containing species therethrough.

Claim 7 is to a substrate processing chamber comprising at least one of the wall, substrate support, ring, or gas distributor, the component comprising a structure composed of metal and having an electroplated coating comprising an interface having a thickness with a gradually changing concentration of yttrium-containing species therethrough.

Applicant respectfully submits that Morita et al. does not anticipate amended claims 1 and 7, because Morita et al. does not teach each and every element of claim 1, or each and every element of claim 7. Specifically, Morita et al. does not teach a component structure composed of metal as claimed in claims 1 and 7. Instead, Morita et al. teaches a structure comprising a ceramic material comprising a sintered body of alumina (which is aluminum oxide). Morita et al. teaches:

"The first aspect of this invention is a ceramic material characterized by comprising a base material substantially made of a sintered body of alumina and a yttrium-aluminum-garnet (YAG) layer having a thickness of 2  $\mu\text{m}$  or more, and which is formed on the surface of the base material." Page 1, paragraph 0013. Thus, Morita et al. teaches that the base material is a sintered ceramic body and not a

metal body. Consequently, Morita et al. does not teach a component structure composed of metal, as claimed in claims 1 and 7. Accordingly, Morita et al. does not teach each and every element of claim 1 or claim 7, and consequently, does not anticipate claim 1 or 7, the claims dependent therefrom.

Furthermore, claims 1 and 7 are not obvious over Morita et al. because Morita et al. does not teach, suggest, or motivate applying an electroplated coating comprising yttrium-containing species on a component structure composed of metal, as claimed. First, Morita et al. does not teach a substrate processing chamber component structure composed of metal, and instead teaches an underlying structure comprising a ceramic material comprising a sintered body of alumina (aluminum oxide). [Page 1, paragraph 0013.] A sintered body of alumina is a ceramic body and is not composed of metal, as recited in claims 1 and 7.

Further, upon reading Morita et al., one of ordinary skill would not be motivated to apply a yttrium containing coating to an underlying structure composed of metal as claimed. Morita et al. teaches "...the sintered body of YAG is excellent in the plasma resistance, but inferior in the mechanical properties such as bending strength and breakage toughness." (Page 1, paragraph 0011.) Thus Morita et al. teaches that while the sintered body is excellent in the plasma resistance, it is inferior in mechanical properties such as bending strength and breakage toughness. Morita et al. then teaches that applying a YAG coating on the sintered body of the ceramic structure provides better mechanical properties to the underlying ceramic. Thus, Morita et al. solves a problem of breakage of an underlying ceramic structure by applying a YAG coating. Consequently, Morita et al. teaches a problem with ceramic structures related to their weaker mechanical strength, and then teaches solving the weak mechanical strength problem by applying a sintered YAG coating on the ceramic structure. These teachings would not motivate one of ordinary skill in the art to apply the YAG coating taught by Morita et al. to a component structure composed of metal because unlike ceramics, metals are not weak or brittle in mechanical properties. Thus neither the problem solved by Morita et al. nor the solution to the problem, would apply to a

component structure composed of metal as claimed. Accordingly, the teachings of Morita et al. would not motivate one of ordinary skill in the art to apply a yttrium containing coating to an underlying structure of metal, as claimed. Consequently, Morita et al. does not teach or suggest, and consequently does not motivate derivation of, claims 1 or 7, or the claims dependent therefrom.

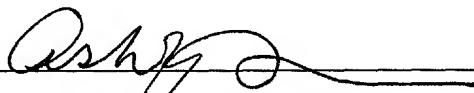
In addition, a prior art reference may be considered not to teach an invention and thereby fail to support an obviousness rejection, when the stated objectives of the prior art reference reinforce such an interpretation. *WMS Gaming, Inc. v. International game Tech.*, 184 F. 2d 1339 (Fed. Cir. 1999). As note in the passage cited above, Morita et al. teaches that a “first aspect of this invention” is that it is a ceramic material. Thus Morita et al. is primarily teaching an invention comprising a structure in which both the base material and the coating are made from a ceramic material. This evidences that Morita et al.’s objectives are directed to structures made from ceramic materials and not structures composed of metal as claimed. Accordingly, as Morita et al.’s stated objectives are different, Morita et al. should not be relied on for an obviousness rejection.

For these reasons, claims 1 and 7, and the claims dependent therefrom, are not obvious over Morita et al.

The current amendments and arguments are believed to render the present claims in condition for allowance. Should the Examiner have any questions regarding the above remarks, the Examiner is requested to telephone Applicant's representative at the number listed below.

Respectfully submitted,  
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